

*original
claims*

CLAIMS

1. An isolated nucleic acid comprising a nucleotide sequence encoding an *E. cloacae* polypeptide selected from the group consisting of SEQ ID NO: 5663 - SEQ ID NO: 11324.

2. A recombinant expression vector comprising the nucleic acid of claim 1 operably linked to a transcription regulatory element.

10 3. A cell comprising a recombinant expression vector of claim 2.

4. A method for producing an *E. cloacae* polypeptide comprising culturing a cell of claim 3 under conditions that permit expression of the polypeptide.

15 5. An isolated nucleic acid comprising a nucleotide sequence encoding an *E. cloacae* polypeptide or a fragment thereof, said nucleic acid selected from the group consisting of SEQ ID NO: 1 - SEQ ID NO: 5662.

20 6. A recombinant expression vector comprising the nucleic acid of claim 5 operably linked to a transcription regulatory element.

7. A cell comprising a recombinant expression vector of claim 6.

25 8. A method for producing an *E. cloacae* polypeptide comprising culturing a cell of claim 7 under conditions that permit expression of the polypeptide.

9. A probe comprising a nucleotide sequence consisting of at least 8 nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 - SEQ ID NO: 5662.

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10. An isolated nucleic acid comprising a nucleotide sequence of at least 8 nucleotides in length, wherein the sequence is hybridizable to a nucleic acid having a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 - SEQ ID NO: 5662.

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11. A vaccine composition for prevention or treatment of an *E. cloacae* infection comprising an effective amount of a nucleic acid of claim 5 and a pharmaceutically acceptable carrier.

12. A vaccine composition of claim 11, further comprising an adjuvant.

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13. A vaccine composition of claim 11, further comprising one or more additional active ingredients.

14. A method of treating a subject for *E. cloacae* infection comprising 20 administering to a subject a vaccine composition of claim 11, such that treatment of *E. cloacae* infection occurs.

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15. A method of claim 14, wherein the treatment is a prophylactic treatment.

16. A method of claim 14, wherein the treatment is a therapeutic treatment.

17. A recombinant or substantially pure preparation of an *E. cloacae* polypeptide or a fragment thereof, wherein said polypeptide is selected from the group consisting of SEQ ID NO: 5663 - SEQ ID NO: 11324.

5 18. A vaccine composition for prevention or treatment of an *E. cloacae* infection comprising an effective amount of an *E. cloacae* polypeptide of claim 17 and a pharmaceutically acceptable carrier.

10 19. A vaccine composition of claim 18, further comprising an adjuvant.

20. A vaccine composition of claim 18, further comprising one or more additional active ingredients.

15 21. A method of treating a subject for *E. cloacae* infection comprising administering to a subject a vaccine composition of claim 18, such that treatment of *E. cloacae* infection occurs.

20 22. A method of claim 21, wherein the treatment is a prophylactic treatment.

23. A method of claim 21, wherein the treatment is a therapeutic treatment.

24. A method for detecting the presence of a *Enterobacter* nucleic acid in a sample comprising:

(a) contacting a sample with a nucleic acid of claim 5 under conditions in which a hybrid can form between the probe and a *Enterobacter* nucleic acid in the sample; and

(b) detecting the hybrid formed in step (a), wherein detection of a

5 hybrid indicates the presence of a *Enterobacter* nucleic acid in the sample.

25. A computer readable medium having recorded thereon the nucleotide sequences depicted in SEQ ID NO: 1 - SEQ ID NO: 5662 or fragments thereof.

10 26. A computer based system for identifying fragments of the *Enterobacter* genome of commercial importance comprising the following elements;

a) a data storage means comprising the nucleotide sequences SEQ ID NO: 1 - SEQ ID NO: 5662 or fragments thereof,

b) a search means for comparing a target sequence to the

15 nucleotide sequences of the data storage means of step (a) to identify homologous sequences, and;

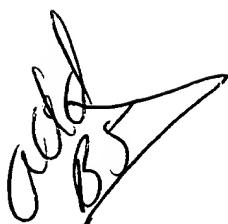
c) a retrieval means for obtaining said homologous sequences(s) of step (b).

20 27. A method of identifying commercially important nucleic acid fragments of the *Enterobacter* genome comprising the step of comparing a database comprising the nucleotide sequences SEQ ID NO: 1 - SEQ ID NO: 5662 or fragments thereof with a target sequence to obtain a nucleic acid molecule comprised of a complementary nucleotide sequence to said target sequence, wherein said target

25 sequence is not randomly selected.

28. A method for identifying an expression modulating fragment of the *Enterobacter* genome comprising the step of comparing a database comprising the nucleotide sequences SEQ ID NO: 1 - SEQ ID NO: 5662 or fragments thereof with a target sequence to obtain a nucleic acid molecule comprised of a complementary 5 nucleotide sequence to said target sequence, wherein said target sequence comprises sequences known regulate gene expression.

AUGUST 2013 10:30 AM

A handwritten signature in black ink, appearing to read "John Doe".